habitats, a more responsible and formal analysis of the risks to coral reefs of the proposed actions is clearly called for.

Past experience shows that physical dredging damage due to human error is indeed likely. In fact, coral reefs are mostly damaged by dredging. Poorly planned and implemented dredging operations have caused the demise of many reefs. Straughan (1972) condemned dredging for the destruction of some Florida Keys reefs. Poor planning at a beach renourishment dredging project off Hallandale, Florida resulted in reef burial. Blair and Flynn (1988) documented the destruction of 2 acres of coral reefs at another beach renourishment project in the Miami area. The DFR cannot proceed, therefore, on the unjustified assumption that errors and accidents will not occur. They do. They have. The risk of them happening again must be rigorously evaluated via formal risk analysis, so that appropriate safeguards and actions may be implemented.

To determine what should be covered in such a risk analysis, we must consider how dredging has been shown to affect coral reefs.

Dredging operations pose three main risks to coral reefs: (1) physical damage; (2) sediment loading from the dredge plume; and (3) increases in turbidity. (Marszalek, 1981). The first two categories produce catastrophic damage.

Physical Damage

The physical impacts of dredge anchors, cables, chains, pipes, and suction and cutting heads deployed in the vicinity of coral all too often include crushing of coral, dislodging and overturning of coral heads, and the infliction of lesions that lead to infection and death of the coral colonies (U.S. Department of the Interior, Minerals Managent Service 1984).

But physical damage from dredging accidents can be much more catastrophic. In a1988 example, two acres of natural coral reef were damaged or destroyed by a dredge during the rebuilding of Miami's Sunny Isles Beach. The damage was depicted as some of the severest reef destruction in modern South Florida history, according to Carlos Espinosa, then Chief of the Water Management Division of the county's Department of Environmental Resources Management.

Even though the dredging zone was established with dredging barge paths no closer than 200 feet to the nearest coral areas, this did not prevent the damage. The dredge strayed off its charted course and plowed as much as 150 feet into coral habitat without the dredge operators ever becoming aware of it. The dredge was pulled over the reef numerous times, in a path of destruction in some places 350 feet wide (Blair and Flynn, 1988). Even when chunks of broken coral began spewing out of the dredge suction pipe, the barge operators assumed it was relic material buried under the sand pocket they were working.

Sedimentation

Silt created by dredging remains in the local area for long periods and is resuspended during storms. Natural resuspension can also be compounded by the presence of silt fill discharged at the dredge site by hopper dredges.

The usual result of chronic sedimentation is stressed corals susceptible to disease. The occasional result is reef habitat totally buried under discharged dredge silt sediment, as in the case of Torrecilla Lagoon, Puerto Rico, where sedimentation from dredging almost destroyed coral reefs northwest of Boca de Cangrejos (cited in Goenaga and Boulon, 1992).

Turbidity

Stony corals , in particular, are susceptible to the effects of elevated levels of turbidity due to dredging (Dodge et al., 1974; Loya, 1976; Dodge and Vaisnys, 1977; Bak, 1978; Lasker, 1980; Marszalek, 1981; Rogers, 1983).

High turbidity resulting from fine suspended particles generated by dredging decreases the amount of light (a vital source of energy) available to corals for the photosynthetic fixation of calcium carbonate (Johannes, 1975), thus reducing coral calcification (growth) rates (Goreau, 1961; Lasker, 1980). Turbidity also clogs the filter feeding mechanisms of coral polyps and causes continual energy losses by the necessity of continuous shedding of the protective mucus layer secreted by coral polyps (Lasker, 1980; Dallmayer et al., 1982).

Moreover, sediments excavated by dredging are often anaerobic and bind up available dissolved oxygen. This forces reef organisms to increase respiration to remove silt, further lowering dissolved oxygen levels. Coupled with this increased respiration is reduced photosynthesis and oxygen production due to lowered light levels.

The usual result of chronic siltation is stressed corals susceptible to disease. The quantity of turbidity and the length of time required for exertion of its maximum stress effect is not known, but corals that are stressed expel essential symbiotic zooxanthellae and take on a pallid appearance prior to mortality (Goreau, 1964; Rogers, 1979; Glynn et al., 1984). Generally, mortality ensues within six weeks of such reactions.

Dredging operations should not and must not be allowed to destroy reef habitat. Once the reefs have been impacted, aesthetic, educational and scientific value all go down. These are negatives for Florida's economy and environment -- and the risks should be understood clearly. For this very reason, we are asking that the DFR include a Risk Analysis Section on the Effects of Dredging on Coral Reefs, with formal evaluation of impact probabilites and expectable impact severities for the various actions proposed in the DFR.

Nearshore Berm Impacts Need Examination

The DFR introduces the use of submerged nearshore sand berms to be used as feeders for beaches. We are concerned about the possible impacts which such nearshore berms could have on nearby hardbottoms and seagrass beds.

Since the nearshore berms would be constructed with the dredged sand, we must expect that the berms will contain significant portions of silt and fines, and that they -- just like renourished beaches -- will produce chronic silt fines for years after construction. The sobering difference is that the berms would be much closer to any nearby nearshore hardbottoms -- and that has to be adequately considered in the DFR. The extend to which berm silt plumes would affect and impact hardbottoms must be covered in the DFR and incorporated into the risk analysis requested above. In addition, a risk assessment must be

made of the possible total shifting of the sand berm onto hardbottom habitat as the result of a storm. The probability of such an occurrence, and the severity of impact, must be evaluated.

Based on that requested analysis, the DFR should not consider the use of nearshore sand berms wherever the analysis shows that nearshore hardbottoms would be placed at significant risk of damage or impact due sand berm effects.

Project Scheduling Should Avoid Turtle Nesting Season

According to the DFR, 61 miles of renourished beaches will be produced in DFR proposed actions for Region III. The DFR describes how these new miles of beaches will benefit endangered turtles by providing incresed nesting habitat. However, we are greatly concerned about the impacts that endangered turtles will face from each proposed project as it is being constructed, if such construction occurs during turtle nesting season's summer months.

Sea turtle nesting peaks during the summer months of the year. It is extremely important that nesting beaches not be disturbed during these months so that sea turtle nesting is not in any way altered by beach renourishment operations. We request that summer dredging be limited to a minimum wherever possible.

Another unexplored issue in the DFR is the effects of incompatible sand on endangered sea turtles. The sand which is chosen to be used for renourishment must provide the same texture, temperature and weight as the sand which is currently used by turtles for nesting. Inappropriate sand could have catastrophic consequences for sea turtles populations by, for example, altering hatchling sex ratios due to improper temperature gradients in the nest. Also, nesting would be unsuccesful if inappropriate sand caused the collapse of nests due to improper sand texture, or if hatchlings were unable to dig out of the nest.

Night dredging should also be kept to a minimum because this is when turtles are most likely to begin their journeys toward shore. Limiting night dredging would greatly reduce accidents from machinery operations on sea turtles and would limit noises and disturbances which would scare the turtles and force them not to travel towards the beaches for nesting purposes. All these factors must be addressed in the DFR before it declares the construction of 61 miles of new beach to be wholly beneficial to the endangered turtles.

Hardbottoms Must Be Adequately Mapped

To limit hardbottom and coral reef destruction, we also request detailed mapping of all seagrass, hardbottom and coral reef habitats in the vicinity of each proposed beach renourishment project before that project's design is finalized and its permits issued. This must be a preconstruction requirement for both sand deposition areas nearshore and dredging areas offshore. Mapping will help reduce navigational error due to the lack of knowledge of where such very fragile habitats can be found. Detailed mapping would reduce the risk of damage to acres of offshore reefs and nearshore hardbottoms.

In Conclusion

Coral reefs must be protected from dredging operations in order to ensure their ongoing survival. We need further action to be taken within the context of this DFR before Region III beach renourishment operations go forward. The DFR, although containing several significant improvements in habitat safeguarding, still needs further work in order to ensure protection to sensitive marine habitats. Even though some of the proposals in the DFR have come a long way towards a more environmentally safe policy, the need for further protection is required and requested, based on the above comments.

Finally, but most importantly, we must insist on specific assurances that the development of this DFR and its Environmental Impact Statement will not result in the waiving of Environmental Assessment requirements for each specific project included in the DFR. The DFR deals with environmental considerations only in general terms, and it will be essential that each project provide a more specific environmental assessment in order for that project to be in compliance with National Environmental Procedures Act (NEPA) requirements.

Thank you for this opportunity to comment. We look forward to your responses and to the incorporation of our requests and recommendations in the Final Feasibility Report for the Coast of Florida Erosion and Storm Effects Study for Region III.

Sincerely,

Alexander Stone

ALEXANDER STONE
Director
American Littoral Society, Inc.
(305) 358-4600
(FAX) 358-3030

AS:jf
enc: lit. refs.

RESPONSE TO COMMENTS FROM THE BEACHES AND NEARSHORE INITIATIVE, LETTER DATED OCTOBER 10, 1996.

Recommends 600 foot no dredge buffer zones around hardbottom habitats.

Response: Throughout our involvement in the activity and in coordination with the Florida Department of Environmental Protection, local sponsors, and county environmental resource management agencies, we have evaluated the impacts of this activity and explored various measures to minimize adverse impact to hardbottoms. Measures currently employed include lighted bouys, sediment/turbidity monitoring, diver monitoring for reef impacts, real-time Global Positioning Systems (GPS), and requirement for continuous movement of dredging activity the length of the borrow site. Other factors such as currents and wave climate may also influence the potential impact to reef and other hardbottoms.

Improvements in technology and dredging technique have reduced (and will probably continue to reduce) the risk of damage to reef and other hardbottoms in the vicinity of the off-shore borrow sites. We will continue to adopt methods and buffer zone widths acceptable to the Federal, State, and local agencies having authority and expertise on this matter.

Recommends 2:1 mitigation ratio.

Response: The mitigation ratio very often involves a 2:1 or greater ratio of effective hardbottom surface area for mitigation. Depending on the amount and kind or resource impacted, the actual level and method of mitigation has varied from concrete rubble reefs to limestone boulders to construction of fields of special reef modules as described in the draft EIS (pages EIS-54 & 55).

Recommends coquina boulder artificial reefs.

Response: While natural limestone has been common component of such mitigation, we have not used coquina boulders for such mitigation. Coquina is not native to the region III area. In addition, we are not aware of coquina boulder sources which would be economically competative with natural limestone. We do not beleive it appropriate to mine coquina from off-shore or beaches along areas of Florida's coast where it presently occurs. If economic and environmentally acceptable sources of coquina become available, we would examine this as a potential source of mitigation material worthy of further investigation.

Recommends additional inlet bypassing.

Response: Sand transfer plants at Lake Worth and South Lake Worth Inlets were found beneficial and cost effective for the National Economic Development (NED). Sand transfer plants at "all" inlets in the Region III study area would not necessarily be in the Federal interest or the best engineering solution to the interuption of sand transport at the inlets. The Corps will continue to examine the potential for sand transfer plants and other means of reducing the impact of inlets on the littoral transport of sand.

Recommends "formal risk analysis" of impacts to offshore reefs.

Response: Because of continual changes in technology and technique and other variables, a formal risk analysis would be of questionable value. The report, however, fulfills the requirements of part 6-133 of Engineer Regulation ER 1105-2-100 on Evaluation Procedure: Risk and Uncertainty. As stated above, it is reasonable to assume that improvements in monitoring, dredge positioning, and other techniques would progressively reduce risks to environmental resources from shore protection activities.

Need to fully assess the possible impacts of nearshore sand berms upon nearby hardbottoms.

Response: Impacts of nearshore sand berms on nearby hardbottoms are evaluated in much the same manner as for beach placement. The equilibrium profile of the fill is considered in determining impacts to nearby environmental resources.

Need to avoid turtle nestling season.

Response: As protected species, sea turtles are an issue of concern. We continue to conduct extensive coordination with the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the State agencies on protected species issues (see sections 4.3.1.1 & 4.3.2.1 of the EIS). Avoiding beach placement during the turtle nesting season is not necessarily appropriate for all segments of the Region III study. For example in Dade County, the nests are routinely identified and relocated to a safe hatchery whether beach nourishment is taking place or not.

Need detailed mapping of all seagrass beds, nearshore hardbottom habitats and offshore reefs in the vicinity of a beach renourishment project before final project permitting and operations.

Response: As stated in the EIS, we will conduct a more detailed evaluation of environmental resources as more specific project plans are developed and proposed for construction.

Insist on specific NEPA documentation for each project in the report.

Response: For each project segment, we will evaluate the scope and potential impacts. If the scope and impacts of any segment proposed for construction are not adequately addressed in the EIS and feasibility report, we will prepare the adequate level of supplemental NEPA documentation.

STATE OF FLORIDA
DEPARTMENT OF COMMUNITY AFFAIRS

EMERGENCY MANAGEMENT • HOUSING AND COMMUNITY DEVELOPMENT • RESOURCE PLANNING AND MANAGEMENT

LAWTON CHILES
Governor

JAMES F. MURLEY
Secretary

October 4, 1996

Mr. A. J. Salem
Department of the Army
Jacksonville District Corps of Engineers
Post Office Box 4970
Jacksonville, Florida 32232-0019

RE: Department of the Army - Beach Erosion Control Projects - Draft Feasibility Report - Draft Environmental Impact Statement for the Coast of Florida Erosion and Storm Effects Study, Region III - Palm Beach, Broward and Dade Counties, Florida
SAI: FL9608020623C

Dear Mr. Salem:

The Florida State Clearinghouse has received your notification of the above-described project, and has forwarded it to the appropriate state agencies for review. In order to receive comments from all agencies, an additional fifteen days is requested for completion of the review. Therefore, the clearance letter due date for this project will be extended from October 1, 1996, to October 16, 1996. If all comments are received prior to the extended date, every effort will be made to forward the clearance letter to you at an earlier date.

Thank you for your understanding. If you have any questions regarding this matter, please contact Ms. Keri Akers, Clearinghouse Coordinator, at (904) 922-5438.

Sincerely,

Ralph Cantral, Executive Director
Florida Coastal Management Program

RC/cc

STATE OF FLORIDA
DEPARTMENT OF COMMUNITY AFFAIRS

EMERGENCY MANAGEMENT • HOUSING AND COMMUNITY DEVELOPMENT • RESOURCE PLANNING AND MANAGEMENT

LAWTON CHILES
Governor

JAMES F. MURLEY
Secretary

September 13, 1996

Mr. A. J. Salem
Department of the Army
Jacksonville District Corps of Engineers
Post Office Box 4970
Jacksonville, Florida 32232-0019

RE: Department of the Army - Beach Erosion Control Projects - Draft Feasibility Report - Draft Environmental Impact Statement for the Coast of Florida Erosion and Storm Effects Study, Region III - Palm Beach, Broward and Dade Counties, Florida
SAI: FL9608020623C

Dear Mr. Salem:

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Thank you for your understanding. If you have any questions regarding this matter, please contact Ms. Keri Akers, Clearinghouse Coordinator, at (904) 922-5438.

Sincerely,

Chris McCay

for Ralph Cantral, Executive Director
Florida Coastal Management Program

RC/cc

UNITED STATES DEPARTMENT OF COMMERCE
Office of the Under Secretary for
Oceans and Atmosphere
Washington, D.C. 20230

September 9, 1996

Mr. A. J. Salem
Chief, Planning Division
DOA, Jax, District COE
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Salem:

Enclosed are comments on the Draft Environmental Impact Statement for Coast of Florida Erosion and Storm Effects Study, Region III. We hope our comments will assist you. Thank you for giving us an opportunity to review this document.

Sincerely,

Donna S. Wieting
Acting Director
Ecology and Conservation Office

Enclosure

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
9721 Executive Center Drive N.
St. Petersburg, Florida 33702

August 28, 1996

Colonel Terry Rice
District Engineer, Jacksonville District
Department of the Army, Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Dear Colonel Rice:

The National Marine Fisheries Service (NMFS) has reviewed the Draft Feasibility Report and Draft Environmental Impact Statement (DEIS) for the Coast of Florida Erosion and Storm Effects Study, Region III (COFS) dated August 1, 1996. The report summarizes and recommends solutions for the beach erosion and storm damage problems of the southeast Atlantic coast of Florida including Palm Beach, Broward, and Dade Counties. Beach nourishment is the recommended solution for most of the shorelines identified in the study. Nearshore berms also are proposed as are sand bypass plants.

Beach nourishment activities result in adverse impacts to three major types of fishery habitat: softground, hardground, and seagrasses. Section 4.3.1.4 of the DEIS describes the impacts to softground habitat and Section 4.3.2.4 states: "Although major loss of softground fauna and infauna may occur in some borrow and fill areas in the short-term from COFS projects, no long term (longer than several years) and, therefore, no significant adverse impacts are anticipated from COFS actions. Accordingly, no mitigation would be necessary for impacts to softbottom communities." In Palm Beach County 21.79 linear miles of shoreline will be nourished. Broward County will have 21.8 linear miles of beach nourished, and in Dade County 15.35 linear miles of nourishment are proposed. In total 58.94 linear miles will be nourished. While each of the respective segments may seem small and pose no significant impact by itself, nearly 59 miles in total will be impacted. Also, Section 219 of the COFS indicates that combining nourishment activities will yield cost savings primarily due to the high cost of mobilizing equipment. If this is the case, then larger sections of beach will be impacted. The impact of nourishing several miles of beach at a time will affect the softbottom communities' ability to replace itself. In addition to the softbottom community being affected, the fisheries that use the benthic fauna and infauna for food chain support will also be adversely affected. Accordingly, we recommend that sections 4.3.1.4 and 4.3.2.4 of the DEIS be re-evaluated in light the publication titled, **A Review and Synthesis of Data of Surf Zone Fishes and Invertebrates in the South Atlantic Bight and the Potential Impacts from Beach Renourishment,** Edited by Courtney T. Hackney, Martin H. Posey, Steve W. Ross and Amy R. Norris and prepared for the Wilmington District, US Army Corps of Engineers, Wilmington, North Carolina, May 1996.

Printed on Recycled Paper

Hardground impacts resulting from COFS recommendations in Palm Beach County include 1.7 acres at Ocean Cay/Juno (Section 255), 18 acres at North-end Palm Beach Island (Section 259), 3.65 acres at Palm Beach Island Mid-town (Section 260), and 5.4 acres at South-end Palm Beach Island (Section 261). Total hardground impacts for Palm Beach County are 28.75 acres. Broward County hardground impacts include 4.65 acres at Deerfield Beach/Hillsboro Beach (Section 268), 12.25 acres at Pompano/Lauderdale-By-The-Sea (Section 270), and 18 acres at Fort Lauderdale (Section 271) for a total of 34.9 acres. Dade County hardground impacts include only 5.25 acres at Golden Beach (Section 278/279); however, this may be a high quality area. The DEIS should indicate if this area has ever been subject to nourishment activities in the past. If it has not, it may be difficult to mitigate for impacts to this area. The total acreage including all three COFS counties is 68.9 acres. Given the large amount of hardground that may be lost as a result of the COFS, the mitigation being proposed in the DEIS may be insufficient. The NMFS refers the Corps to the South Atlantic Fishery Management Council's (SAFMC) Fishery Management Plan for Coral, Coral Reefs, and Live/Hard Bottom Habitats of the Atlantic Region (FMP). The importance of hardground habitat to fishery resources is well documented in this plan. A 0.5 to 1 mitigation to impact ratio may not be acceptable for 68.9 acres of hardground impacts.

The acreage totals used above were taken from the text of the COFS. Estimated acreage totals for both Palm Beach and Broward Counties in the COFS conflict with those presented in Section 4.3.1.3 of the DEIS. These different totals should be reconciled.

Seagrass impacts are addressed in the DEIS, but not in the COFS, and are limited to those areas being nourished at Key Biscayne, Dade County. Impact estimates range from 6 to 70 acres. Mitigation would be pursued using techniques described by Fonseca (1993). Seagrasses are one of the most important fishery habitats in south Florida for both recreational and commercial fisheries. The loss of 6.0 to 70 acres of seagrass would represent a significant adverse impact. It is highly unlikely that any project that impacts 6.0 to 70 acres of seagrass will be able to mitigate for these impacts. Out-of-kind mitigation for seagrass impacts is undesirable as many of the functions provided by seagrasses cannot be replaced. Consequently, the NMFS recommends that beach nourishment activities that adversely effect seagrasses not be pursued. The SAFMC's FMP, Amendment 3, deals specifically with seagrass habitat. This amendment contains the SAFMC policy statement for the protection and enhancement of marine submerged aquatic vegetation (SAV) habitat. The DEIS should consider the SAFMC SAV policy as it supports fishery management plans developed under the Magnuson Fishery Conservation and Management Act.

We appreciate the opportunity to provide comments on the COFS. If you have any questions regarding these comments, please contact Mr. John Iliff of our Miami Field Office at 305/595-8352.

Sincerely,

Andreas Mager, Jr.
Assistant Regional Director
Habitat Conservation Division

RESPONSE TO COMMENTS FROM THE NATIONAL MARINE FISHERIES SERVICE, LETTER DATED AUGUST 28, 1996.

1. Paragraphs 2 and 3. The feasibility report and EIS are recommending only three project segments for Federal participation. The recommended project segments are the Lake Worth Inlet sand transfer plant (STP), the South Lake Worth Inlet STP and beach nourishment along 0.6 miles of shoreline at Dania. The remaining project segments discussed in sections 2.4 through 2.4.3.5 of the DEIS are not recommended for authorization at this time. The sand transfer plants will be designed to annually bypass about 160,000 cy (Lake Worth Inlet) and 120,000 cy (South Lake Worth Inlet) of sand to the beaches south of the inlets. Actual bypassing will be performed with smaller amounts of sand discharged periodically throughout the year as needed. The recommended nourishment at Dania would involve placing sand on approximately 3,200 feet of beach between two existing projects. In this area, nearshore hardgrounds are far enough offshore they should not be impacted during nourishment activities. The Corps does not anticipate that the construction of the STPs, sand bypassing or beach nourishment at Dania would significantly affect soft or hard bottom communities in the area. To ensure that impacts are minimized, additional environmental studies and supplemental NEPA coordination will be conducted during planning, engineering and design phase for each of the recommended project segments authorized.

2. Paragraph 4. The estimated acreage totals of hardground impacts for Highland Beach (Section 265) and Fort Lauderdale (Section 271) in the feasibility report were in error. The estimated acres should be 1.9 acres for Highland Beach and 8.1 acres for Fort Lauderdale. This gives acreage totals of 30.65 for Palm Beach County, 25.0 acres for Broward County and 5.25 acres for Dade County. These figures were rounded in the DEIS to 31, 25 and 5 acres respectively. The acreage totals have been corrected in the feasibility report.

3. Paragraph 5. The proposed beach nourishment at Key Biscayne is not being recommended at this time. If considered in the future, supplemental NEPA coordination and documentation would be required and would consider SAFMC SAV policy.

FAX LETTER TO: MR. GEORGE STRAIN . FAX 904-232-3442
ARMY CORPS OF ENGINEERS, JACKSONVILLE

FROM FRANK RYSAVY, CHAIRMAN FAX & PHONE 954-764-1426
HILLSBORO INLET DISTRICT

14 August 1996

Dear George Strain:

I called today to talk to Ed Salem, and was very saddened to learn he was hospitalized on Friday due to a small stroke. Ed, Dr. Bruun, Lonnie Ryder, Harvey Sasso, and others, have helped me make practical decisions the last dozen years, at the inlet.

The Draft Feasibility Report, and Draft Environmental Impact Statement for the Coast of Florida Erosion and Storm Effects Study, Region III Ed sent to me; has been circulated for comments from the inlet board of commissioners.

I understand you will be taking over until he returns. A copy of my letter to him covering my initial observations about the studies follows for your information and use.

Please note especially my comments on page 2 paragraph 8, about Chart 72-1 in your Appendix A. This chart is in serious need of updating. Many changes have occurred since 1975.

I look forward to working with you. I remember the last time we met was at the inlet. It was almost a shocker. A USCG cutter and the Fish City Pride fishing boat came close to collision at the dog leg in our outer channel, due to some wave action at the tidal rip that forms at the east end of the jetties. Fortunately both boat captains were very capable and experienced.

On behalf of the inlet commissioners and myself, I would like you to extend our best wishes to Ed for a complete and speedy recovery. He will be remembered in our prayers.

Very truly yours,

Frank Rysavy, Chairman

Copy: All inlet commissioners
Mary Ann Carbone, Sec'y

file: acestran.896

HILLSBORO INLET DISTRICT
812 N.W. 6 Avenue
Ft. Lauderdale, Fl. 33311
fax and phone 954-764-1426

Mr. A.J. Salem
Chief, Planning Division
Army Corps of Engineers
Box 4970
Jacksonville, Fl. 32232-0019

05 August 1996

Dear Mr. Salem:

Thank you for revision 2 of the Draft Feasibility Report (DFR) and Draft Environmental Impact Statement (DEIS) for the Coast of Florida Erosion and Storm Effects Study, Region III for comment. It is the first report received.

Please send copies of this to the following people:

Dr. Per Bruun
34 Baynard Cove Road
Hilton Head Island, S.C.
29928

Mr. Harvey Sasso
Coastal Systems International
464 South Dixie Highway
Coral Gables, Fla. 33146

These people are very knowledgeable and helplful. I have relied on their advice to improve our operations at the Hillsboro Inlet. I will circulate the copy you sent to me, among the inlet District Commissioners.

I reviewed the reports over the weekend. I need to check further for the locations covered by some tables, charts and plates. My initial observations, which may or not be significant for your purposes, are as follows.

1. The beach south of Hillsboro Inlet channel, between monuments R-25 and R-24, is not shown. Refer to plates D-41 & D-42 in the Main Text tables.

2. It appears plate E-5 or E-6 of Appendices A thru I, cover the area of Hillsboro Beach and the inlet.

3. Table F-16, page F-21; and Table F-17, page F-22, Appendices A thru I, appear to cover Hillsboro Beach.

4. Cost benefits in the area our District impacts in the 50 year (2000 to 2050) Benefit to Cost Analysis seems included in Table F-39, page F-49; under the top two sections, Deerfield/Hillsboro Beach (R-1-25) and Pompano Beach (R-26-53). This seems combined in Table 76, page 107; and referenced on page G-10

5. The net 131,000 cubic yard sand budget south of Boca Raton on chart page D-150, may be understated. D-150 shows a 19,000 cubic yard loss offshore, and 20,000 cu.yds more lost, down to 111,000 cu.yds net when the sand arrived a short distance north of Hillsboro Inlet. Refer to chart on page D-173.

I realize, and our dredging records show that sand budgets are calculated guesstimates and sometimes conflict. The area immediately south of the Hillsboro Inlet is holding fairly close to a 50 year line, even after the

severe offshore storms in the past several years. This is largely due to the volume of sand we by-pass. Broward County has been able to defer again the 7-8 year beach renourishment interval in our immediate area, done last in 1983.

The 20,000 cu.yd loss charted between Boca Raton and Deerfield/Hillsboro is an enigma. The 19,000 cubic yard offshore loss at Boca Raton seems high.

Only a 4,000 cu.yd offshore loss is estimated at Hillsboro Inlet. More water passes through Hillsboro than Boca. Records show we by-pass more than 64,000 cu.yds yearly, and are close to the 1987 Fla. statute for sand transfer

My sand budget observations are informational only. Closer study at Boca Raton and Deerfield/Hillsboro, etc., seems valuable only from an academic standpoint, rather than have any significant impact on your report validity.

6. D-173 par.D-347 you might add "....commercial and recreational...." to line 1. Also, nearby deep draft commercial boats can not use Hillsboro Inlet, and go 10 miles south on the intra-coastal to Port Everglades for ocean access

7. The District's prime concern, page D-174, has become navigation safety due to the larger boats that now do, and deep draft boats that can not use the shallow inlet channel. The beam of the larger boats now using Hillsboro Inlet exceeds the length of boats in the area during the original 1950-60's studies.

In D-175 par.D-351, 97,000 cubic yards was for 1991, not an average. Your avorable comment on our inlet operations, page D-176 par.D-356 is appreciated

8. The 1965 based Chart 72-1 in Appendix A, Project Maps, should be updated. This straight outer channel design, that I support for navigation safety, is in our records of the original channel construction work. The channel is now 200' wide at the jetties. The "settling basin" is inside the weir design of the north jetty. The swing bridge at state road A-1-A was replaced many years ago by a hydraulic bridge that lifts from the south side.

The "mobile dredge pump on trestle" and jetty extension on the north side are not needed. The channel is well maintained by the dredge, elbow barge, and floating dredge pipe we now use. The newer south jetty is about 350' from the rock reef north jetty of the channel. The inside channel bend was straightened and is maintained as a straight channel, due to the strong tidal currents.

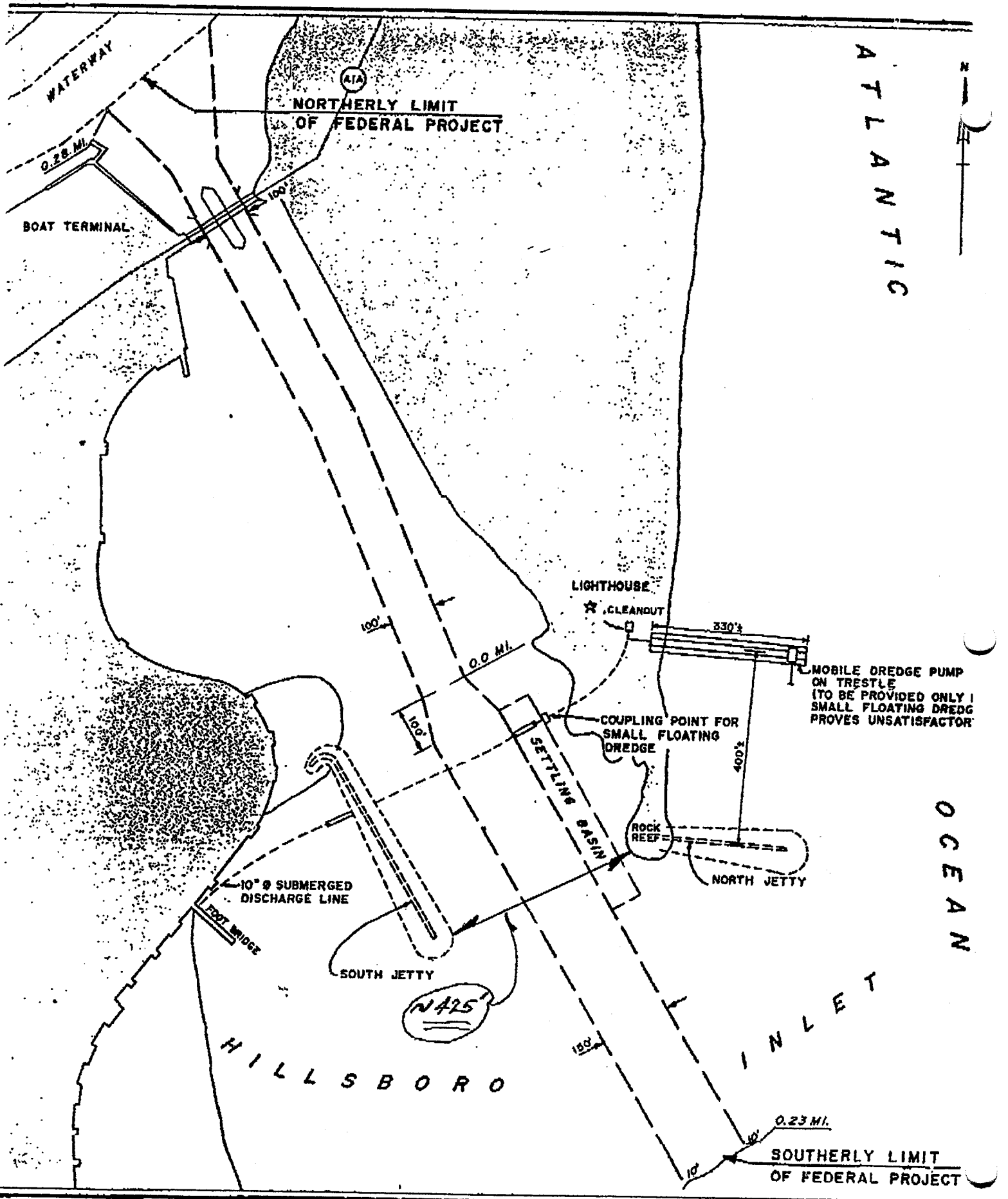
I was favorably impressed by the assignment of an ACOE project manager to the Hillsboro Project, and the visit by 4 ACOE engineers during the first week of July. It appears there are now prospects of improving our navigation problems. I look forward to seeing you at the next Beaches & Shores seminar.

Very truly yours,

Frank Rysavy, Chairman

opies: Inlet District Commissioners
Mary Ann Carbone

file: ACESALEM.896



SIDE 1 ACOE CHART 72-1

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
SOUTHEAST/CARIBBEAN
Richard B. Russell Federal Building
75 Spring Street, S.W.
Atlanta, Georgia 30303-3388

August 14, 1996

Mr. A. J. Salem, Chief, Planning Division
Environmental Branch
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Dear Mr. Salem:

This refers to your memorandum dated August 1, 1996, transmitting the Draft Feasibility Report and Draft Environmental Impact Statement for the Coast of Florida Erosion and Storm Effects Study, Region III.

Our review indicates there will be no significant adverse impact on any HUD programs as a result of this project.

Thank you for the opportunity to review and comment on your proposed project.

Sincerely,

Thomas A. Ficht

Thomas A. Ficht
Supervisory Environmental Officer

August 28, 1996

Planning Division
Environmental Branch

Mr. David Ferrell
U.S. Fish and Wildlife Service
Post Office Box 2676
Vero Beach, Florida 32961-2676

Dear Mr. Ferrell:

I am responding to your telephone conversations with Kenneth Dugger of my staff in August 1996, concerning the Draft Feasibility Report on the Coast of Florida Erosion and Storm Effects Study, Region III (COF). You had some questions concerning the description of the proposed action in the Draft Environmental Impact Statement (DEIS) and what Federal action should be addressed in the Fish and Wildlife Coordination Act Report (CAR) and the Endangered Species Act (ESA) consultation.

One of your concerns is the apparent contradiction between the proposed federal action as stated in the DEIS and previous descriptions of the project in the Biological Assessment we sent you on October 5, 1995, and the Scope of Work sent you on September 12, 1995, requesting a CAR.

While the DEIS indicates that the report would only recommend a new project segment at Dania and sand transfer plants at Lake Worth and South Lake Worth Inlets, it should be noted that the DEIS addresses in some detail a number of other National Economic Development projects which have a potential for Federal authorization.

Please note that the COF study and DEIS are largely programmatic in nature. While only three actions are currently recommended for Federal participation, other actions may be tiered off this study and DEIS.

In view of the above, I request that the ESA consultation include not only the three recommended actions but also evaluate the other actions identified in our Biological Assessment and DEIS as potential "future activities." As discussed, you are currently completing the ESA consultation and this approach appears consistent with part 4.7(C) on programmatic review and part 4.4(B) on incremental steps in the *Draft Endangered Species Consultation Handbook* published by your agency in November 1994.

In a letter dated June 21, 1996, we provided the results of additional field investigations and requested that the CAR be conducted for submittal with our final report in accordance with the amended scope of work proposed in that letter. In the August 26 telephone conversation, you indicated that a new CAR and the amended scope of work are not necessary. It would be more appropriate to provide a letter of clarification rather than a new CAR. If you pursue a letter of clarification, we request that it include the following:

a. The CAR of September 30, 1994, along with your letter of clarification, constitutes the final "2(b)" report for those actions which you have sufficient information (i.e., sand transfer plants).

b. The CAR of September 30, 1994, along with your letter of clarification, also addresses all other actions in the amended scope of work and the DEIS.

c. The CAR of September 30, 1994, along with your letter of clarification, identifies the "coordination necessary during design, construction, and/or operation to fulfill the requirements of Section 2(b)" after submittal of the final feasibility report.

d. The CAR of September 30, 1994, along with your letter of clarification, is sufficient for submittal with the Corps Final Feasibility Report in accordance with policy and guidance of the U.S. Fish and Wildlife Service.

As discussed in telephone conversation, this approach appears consistent with Chapter 3, part D of *Policy and Guidance on Fulfillment of Fish and Wildlife Coordination Act Responsibilities in the Corps of Engineers Water Resource Development Program* published by your regional office in July 1986.

Thank you for working with my staff on this matter. We are looking forward to receiving the ESA consultation and the letter of clarification on the CAR. If you have any questions, please contact Mr. Kenneth Dugger of my staff at 904-232-1686.

Sincerely,

George M. Strain
Acting Chief, Planning Division

Copy Furnished:

Craig Johnson, U.S. Fish and Wildlife Service,
Post Office Box 2676, Vero Beach, Florida 32961-2676

bcc:
CESAJ-DP-I (Stevens)
CESAJ-PD-PC

Dupes/CESAJ-PD-ER/1689/mw
Dugger/CESAJ-PD-ER
Smith/CESAJ-PD-E
Strain/CESAJ-PD-P
Stevens/CESAJ-DP-I
Salem/CESAJ-PD

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(B) Incremental steps

When a statute authorizes an agency to complete an action in incremental steps, the Services shall, at the request of the action agency, issue a biological opinion on the incremental step being considered. That opinion also includes the Services' views on the entire action (50 CFR §402.14(k)). An action agency may proceed with the proposed action after consultation, when:

- the biological opinion does not conclude that the incremental step would violate section 7(a)(2);
- the agency continues consultation with respect to the entire action, and obtains biological opinions, as required, for incremental steps;
- the action agency fulfills its continuing obligation to obtain sufficient data upon which to base the final biological opinion on the entire action;
- the incremental step does not violate section 7(d) concerning irreversible or irretrievable commitment of resources; and
- there is a reasonable likelihood that the entire action will not violate section 7(a)(2) of ESA.

Consultation for the first phase of an incremental step action must be conducted formally to address these five factors. If no adverse effect is likely for intermediate steps, consultation may be conducted informally for such steps.

References

Water quality consultations

This section is reserved pending ongoing negotiations on consultation procedures for this EPA program.

Other national consultations

In the future, several other programs will probably generate national consultation requests. For example, State programs to assume administration of section 404 of the Clean Water Act may require a programmatic conservation review and/or development of specific national consultation procedures.

(C) Regional or Ecosystem Consultations

Action agencies occasionally request multi-action and "ecosystem-based" consultations. These consultations may be step-downs of conservation reviews or national consultations. In these instances, a lead Region or field office may be designated. Regional and ecosystem biological opinions may be signed at the Service's Regional Office or State Office level, as appropriate. Examples of these consultations include:

Regional:

- o APHIS' program to eradicate the boll weevil in southern cotton growing states, to control grasshoppers and crickets in western states, or to control Mediterranean fruit flies in the Southwest.

Ecosystem:

- o A Region 6-led consultation on the continuing operations of all Corps dams on the Missouri River and their effects on listed species within that aquatic ecosystem (bald eagle, piping plovers, Interior least terns and the pallid sturgeon).

- o A Region 3 consultation on operation of Corps facilities along the breadth of the Upper Mississippi River.

- o A Region 2-led consultation with the Bureau of Reclamation on regulations to implement water entitlements on the Lower Colorado River.

- o A Region 1-led consultation with the BLM on grazing activities throughout the range of the desert tortoise, and other program activities within the proposed critical habitat.

Consideration should be given to conducting ecosystem-based consultations, particularly in areas undergoing large HCPs, with the Federal agencies whose future activities may affect one or more species within a regional planning area. This type of consultation would involve programmatic review of the

agencies' activities and would be most effective if conducted simultaneously with development of the HCP. Such an approach could involve a single lead agency, if there is a predominant Federal agency influence (e.g., the Bureau of Reclamation in the Central Valley of California), or could involve a limited number of agencies representing Federal programs in the planning area. Such simultaneous consideration of both Federal and nonFederal programs could (1) assist in assessing overall effects on a species/group of species/ecosystem from multiple actions; (2) result in a better determination of the respective roles of all the parties in conserving the species/ecosystem, (3) assist in determining the priority of all proposed actions for use of any "resource cushion" that may exist, and (4) demonstrate that all parties are being provided equal consideration at equal speed (programmatic consultations do not have applicants and are subject to mutually agreed timeframes).

The Region 2 consultation on the Lower Colorado may be conducted along with an HCP proposed to cover nonFederal activities and candidate species.